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ABSTRACT

The purpose of this study was to provide teachers, supervisors, and school administrators with a valid scale for measuring teacher attitudes toward low achievers in mathematics: the Teacher Attitudes Toward Low Achievement in Mathematics Scale (TALAM). The development of the instrument was carried out in three phases. Phase 1 consisted of selecting an instrument type and preparing possible scale items. A modified Likert-type scale was prepared with input from the literature and content experts. The 85 items developed were placed in subscales for beliefs, feelings, and intended behaviors. In phase 2, the preliminary scale was administered to 51 middle school mathematics teachers. Item analysis resulted in the retention of 45 items for the final scale, the TALAM. In phase 3, the instrument was administered to 105 middle school mathematics teachers in conjunction with two other measures of teacher attitudes. The TALAM was found to be a reliable and valid measure of teacher beliefs, feelings, and intended behaviors. Findings that most teachers have moderately positive attitudes toward low achievers in mathematics are consistent with expectations based on the literature. Four tables present study findings. Appendix A contains the TALAM and scoring directions. (Contains 40 references.) (SLD)

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# MEASURING TEACHER ATTITUDE TOWARD LOW ACHIEVERS IN MATHEMATICS

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Many educators and psychologists believe that mathematical achievement is critically affected by student's attitudes toward their ability to do mathematics as well as the value students place on mathematics in general (Schoenfeld, 1989; Hart, 1989; Goolsby, 1987; Buchanan, 1987; Brophy, 1986; Confrey, 1986; Schunk, 1985; Frary & Ling, 1983; Carpenter, Corbitt, Kepner, Linquist, and Reys, 1980). In this regard, the National Council of Teachers of Mathematics (1989, 1991) proposed that student confidence and attitudes toward mathematics are critical components affecting achievement in mathematics. NCTM has advised educators to foster the development of positive mathematical disposition among school children at all grade levels as a means to maximize learning.

Abundant research indicates that teacher attitudes and behaviors have a great deal of influence on student attitudes and performance in mathematics (Green, 1991; Meek, 1989; Quilter and Harper, 1988; Mounts, 1986; Brophy & Good, 1986; Haladyna, Shaughnessy & Shaughnessy, 1983; Kulm, 1980). Substantial empirical evidence documents inappropriate and differential treatment by teachers toward students perceived by them to be low achievers (Secada, 1991; Moore, 1987; Mounts, 1986; Good, 1981; Brophy, 1979; Rosenthal & Jacobson, 1968). For example, students perceived to be low achievers in mathematics might be seated farther away from the teacher, might receive fewer smiles, less eye contact, more criticism, and be interrupted more often when responding to questions. Teachers sometimes expect students who are from lower

socieconomic status homes, from less educated families, or who are members of a particular minority group to do poorly in mathematics (Foster, Algozzine, Ysseldyke, 1980). The National Council of Teachers of Mathematics (1989, 1991) suggested that teachers develop and maintain positive attitudes and high expectations for all students including low achievers in mathematics. Specifically, low achievers in mathematics deserve the same degree of supportiveness, respect, response opportunities, and encouragement from their teachers that high achievers receive.

The purpose of this study was to provide teachers, supervisors, and school administrators with a valid scale for measuring teacher attitude toward low achievers in mathematics. Such a scale would require minimal time for administration and scoring and results that would be reliable and easily interpretable. The development of instrumentation to measure teacher attitude toward low acheivers was carried out in three phases.

## PHASE I - READINESS

### Method

Phase I of the study consisted of (1) selection of instrument type and format, (2) writing of potential scale items, (3) classification of item directionality by judges and, (4) preparation of the preliminary attitude scale.

After considering various affective scaling procedures, a modified Likert-type scale was determined as most appropriate for this study. Instead of the typical Likert scale allowing

for five response categories, ranging from "strongly agree" to "strongly disagree" with a neutral category included, the number of response alternatives was modified to consist of six response categories ranging from "strongly agree" to "strongly disagree" without the neutral category option.

After determining instrument type and response alternatives, 128 statements about low achievers in mathematics were composed based on input from middle school mathematics teachers, research literature, related scales, and from consultation with experts in mathematics, mathematics education, and psychology. The statements were categorized as follows: (1) teacher beliefs about low achievers in mathematics, (2) teacher feelings about working with low achievers in mathematics, and (3) intended teacher behaviors toward low achievers in mathematics. The categorized items were then studied by a panel of 10 judges who classified each statement as positive, negative, or neutral with regard to low achievers in mathematics. Items were eliminated if not classified by at least 90% of the judges as clearly positive or negative with regard to low achievers in mathematics.

**Results**

A total of 85 items were retained for use in a preliminary attitude scale and placed in three major subscale divisions: beliefs (44 items), feelings (20 items), and intended behaviors (21 items). Categorized items were randomly numbered one through 85 on the preliminary scale and were not separated into three distinct categories for the pilot study.

## PHASE II - PILOT STUDY

### Method

Phase II of the study consisted of (1) administering the preliminary attitude scale to 51 middle school mathematics teachers in East Tennessee, (2) analyzing the data obtained and, (3) preparing the final attitude scale: Teacher Attitudes Toward Low Achievers in Mathematics Scale (TALAM).

### Results

Data analyzed in the pilot study included the responses of all 51 teachers who completed the preliminary attitude scale: "Statements About Low Achievers in Mathematics." A total score and three subscale scores (Beliefs, Feelings, Intended Behaviors) were obtained for each subject. Through application of student's t-tests, significant differences were found between mean scores for each possible pair of the three subscales (Beliefs, Feelings, and Intended Behaviors). Significant differences were also found between each subscale mean paired with the mean total scale score; thereby, indicating the need for three distinct subtest scores instead of one summed score.

Item analysis was conducted for statements comprising the total 85 item preliminary scale and for statements comprising each of the three subscales. All items were examined to determine the discriminating ability of the item. That is, when a positively written item is valid, subjects with a generally positive attitude respond "agree" or "strongly agree"

to the item and those subjects with a generally negative attitude respond "disagree" or "strongly disagree" to the same item. The discriminating ability of items was calculated by establishing positive and negative criterion groups for each of the three subscales and the total scale. The mean score for each individual item was computed for high and low criterion groups and compared through the use of student's t statistic. Significant difference ($p < .01$) between high and low criterion group mean scores for each item was indicative of the ability of the item to discriminate adequately between positive and negative criterion groups.

Item analysis also included item-to-scale correlations for items within each subscale and within the total scale. High correlations between individual item scores and total scale scores suggested that the item represented the attitude under study. Items were eliminated from each subscale if item-to-scale correlations were not statistically significant.

Subscales and total scale analysis included Cronbach's alpha as a measure of internal-consistency reliability. Coefficient alpha's for the three subscales and the total scale ranged from .78 to .93, indicating significantly high ($p < .01$) inter-item correlation among scaled items.

After statements were eliminated on the basis of the logical and empirical criterion previously described, 45 items were retained for use in the final form of the attitude scale: Teacher Attitudes Toward Low Achievers in Mathematics Scale (TALAM). The final 45-item scale was composed of three

distinct subscales, each containing 15 items, designed to measure the following: (1) teacher beliefs, (2) teacher feelings and, (3) intended teacher behaviors, all with respect to low achievers in mathematics. Sample items are shown in Table 1.

**Table 1**

**Example of 15 Items From the Teacher Attitude Toward Low Achievers in Mathematics Scale**

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**Beliefs:**

Low achievers in mathematics do not like challenging assignments.
Low achievers in mathematics are generally energetic.
The work of low achievers in mathematics is usually messy and disorganized.
Low achievers in mathematics are not interested in learning mathematics.
Low achievers in mathematics value the learning of mathematics.

**Feelings:**

I find it rewarding to work with low achievers in mathematics.
I seldom find teaching low achievers in mathematics enjoyable.
I feel angry when assigned to teach low achievers in mathematics.
Most of my interactions with low achievers in mathematics are positive.
Having low achievers in my mathematics class is a burden.

**Intended behaviors:**

Enrichment activities are not suitable for low achievers in mathematics.
Mathematics teachers should provide opportunities for low achievers to see the usefulness of mathematics.
Low achievers in mathematics should experience the same mathematics curriculum as other students.
The most teachers should expect of low achievers is for them to learn basic arithmetic facts.
By trying different teaching methods, teachers can help improve achievement in mathematics.

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Each revised 15-item subscale and the 45-item total scale were submitted to a test for internal-consistency reliability. The alpha on the final 45-item scale was .91 and the alpha for each of the three 15-item subscales ranged from .80 to .90.

To further evaluate the construct validity of the three subscales, a principal components factor analysis was conducted with varimax rotation for all items comprising the 45-item final scale. This analysis yielded data indicating that three major factors accounted for 62% of total scale variance. The three primary factors emerging from factor analysis matched the original grouping of the items when they were written: beliefs, feelings, and intended behaviors. Before items were considered to "load" on a factor, that is, be assigned to a factor, they had to correlate with the factor with an r-value of .50 or higher on one factor and .40 or lower on the other two factors.

## PHASE III - ADMINISTRATION OF THE TALAM

### Method

Phase III of the study consisted of administering the following instruments to a sample of 105 middle school mathematics teachers from a large East Tennessee school district: (1) **Teacher Attitudes Toward Low Achievers in Mathematics Scale** (TALAM), the 45-item attitude scale developed for this study, (2) **Revised Math Attitude Scale** (RMAS) (Aiken & Dreger, 1963), (3) a semantic differential scale measuring

teacher attitude toward low achievers (Steeg, 1982) and, (4) readministration of the TALAM after a period of two weeks.

**Results**

Data treatment included scoring and analyzing the responses of the 105 subjects who completed all four instruments listed above. After TALAM administration, four summed scores for each subject were determined: the three 15-item subscales and the score obtained for the 45-item total scale. Analysis of variance (ANOVA) was undertaken to test the significance of the differences among mean scores for the three TALAM subscales and the total scale yielding a significant F value ($p < .01$). Subsequently, Scheffe's multiple comparison procedure was used to isolate the location of significant differences among mean scores for the TALAM subscales and total scale. As shown in Table 2, significant differences among means were found between the intended behavior subscale and each of the other subscales measuring teacher beliefs and teacher feelings.

The test-retest reliability for each of the 15-item TALAM subscales (Beliefs, Feelings, Intended Behaviors) and for the total 45-item TALAM scale was computed using Pearson's product-moment correlations. As shown in Table 3, coefficients ranged from .70 to .82, indicating a high degree of test-retest reliability for the TALAM.

Subscale and total scale scores from the first administration of the TALAM were compared to scores obtained

**Table 2**

**Scheffe's Multiple Comparison of TALAM Means**

| Comparison of Paired Means | Calculated F values |
|---|---|
| I, II | 00.18 |
| I, III | 00.22 |
| I, IV | 10.85 * |
| II, III | 00.01 |
| II, IV | 08.25 * |
| III, IV | 08.00 * |
| I, II, III, IV | |

Note: * = significance level at 0.01; where
I = mean of beliefs scale,
II = mean of feelings scale,
III = mean of intended behaviors scale and,
IV = mean of total scale.

**Table 3**

**TALAM Test-Retest Inter-Correlation Matrix**

| | RETEST | | | |
|---|---|---|---|---|
| | Beliefs | Feelings | Int. Beh. | Total |
| **TEST** | | | | |
| Beliefs | **.77*** | .60* | .32 | .70* |
| Feelings | .56* | **.80*** | .52* | .75* |
| Int. Beh. | .32 | .36 | **.70*** | .48 |
| Total | .68* | .71* | .56* | **.82*** |

Note: * = significance level 0.01.

from the same subjects on the Revised Math Attitude Scale (RMAS) (Aiken & Dreger, 1963.). Utilizing a Pearson product-moment correlation, weak coefficients ranging from .11 to .19 were found, suggesting little or no relationship between teacher attitude (Beliefs, Feelings, Intended Behaviors) toward

low achievers in mathematics and their general attitude toward mathematics.

Subscale and total scale scores from the first administration of the TALAM were also compared to scores obtained from the same subjects on the semantic differential scale designed by Steeg (1982) to measure teacher attitude toward low achievers in general. Significant correlations ($p < .01$), ranging from .50 to .70, were found between semantic differential scale scores and TALAM scores (Beliefs, Feelings, total TALAM). However, the TALAM subscale measuring intended teacher behaviors toward low achievers in mathematics did not correlate significantly with the semantic differential scale scores ($r = .10$). This result appeared reasonable given that none of the 60 items on the semantic differential scale were designed to measure intended teacher behaviors toward low achievers.

Employing Cronbach's alpha, internal-consistency estimates of reliability were computed for each of the three 15-item TALAM subscales and the total 45-item TALAM scale. As shown in Table 4, reliability coefficients ranged from .70 to .90; thereby, providing further evidence of internal-consistency reliability for the TALAM.

## CONCLUSIONS

Analysis of data in the context of the research reviewed provides substantial evidence indicating that the following conclusions are warranted:

**Table 4**

**Internal-Consistency Estimates of Reliability (Cronbach's Alpha) for the TALAM**

| Scale | # Items | Alpha |
|---|---|---|
| Beliefs | 15 | .84* |
| Feelings | 15 | .86* |
| Int. Behaviors | 15 | .70* |
| Total Scale | 45 | .90* |

Note: * = significance level 0.01.

1. The principles of attitude scale construction in the social psychological literature can be applied to develop reliable and valid instrumentation to measure teacher attitude toward low achievers in mathematics. Moreover, the Likert-type scale appears highly suitable for assessing the affective characteristics of teacher attitude toward low achievers in mathematics.

2. The Teacher Attitudes Toward Low Achievers in Mathematics Scale (TALAM) was found to be a valid and reliable indicator of teacher beliefs, feelings and intended behaviors toward low achievers in mathematics; therefore, the TALAM appears to be a viable method for assessing teacher attitude toward such students.

3. Subjects appear to respond to the TALAM scales in good faith and provide honest and seriously considered responses to items on the scale. This conclusion is based on data analysis indicating that subscale and total scale TALAM scores for the

both groups appeared to be approximately normally distributed with close to expected frequencies of response. Therefore, most of the middle school mathematics teachers involved in the study had moderately positive attitudes toward low achievers in mathematics. High test-retest correlation coefficients also indicate thoughtful responses to items.

## RECOMMENDATIONS

The TALAM scale can be used by teachers to assess their own attitudes or by administrators to assess the attitudes of individuals or groups. As long as anonymity of individual responses and scores is assured, self-report of attitudes should not be affected by a lack of frankness. The scale would be particularly useful during a school or system wide in-service designed to stress the importance of affect and positive mathematical disposition in the mathematics classroom. Through the use of the TALAM, teachers could become aware of negative attitudes and low expectations directed toward low achievers in mathematics and, as a result of their awareness, endeavor to engage in more appropriate and supportive behaviors. The scale can also be useful to researchers by serving as a pre and post test instrument when intervention strategies have been implemented.

**APPENDIX A**
**TEACHER ATTITUDES TOWARD**
**LOW ACHIEVERS IN MATHEMATICS SCALE(TALAM)**

**Directions: This survey consists of a series of statements about low achievers in mathematics or about teaching low achievers in mathematics. Circle the number that indicates the degree to which you agree or disagree with each statement.**

**1 I STRONGLY DISAGREE with the statement.**
**2 I DISAGREE with the statement.**
**3 I SLIGHTLY DISAGREE with the statement.**
**4 I SLIGHTLY AGREE with the statement.**
**5 I AGREE with the statement.**
**6 I STRONGLY AGREE with the statement.**

1. In the long run, whatever I do with low achievers in mathematics will not make any difference in their achievement level.
1 2 3 4 5 6

2. Low achievers in mathematics have the ability to remember what they have learned in mathematics class.
1 2 3 4 5 6

3. I find it boring to teach mathematics to low achievers.
1 2 3 4 5 6

4. The mathematics teacher should provide a great deal of positive reinforcement for low achievers in mathematics.
1 2 3 4 5 6

5. Low achievers in mathematics should be placed in vocational tracks requiring little mathematics as soon as possible.
1 2 3 4 5 6

6. Having low achievers in my mathematics class is a burden.
1 2 3 4 5 6

7. I seldom find teaching low achievers in mathematics enjoyable.
1 2 3 4 5 6

8. I have the patience to work with low achievers in mathematics.
1 2 3 4 5 6

**1 I STRONGLY DISAGREE with the statement.**
**2 I DISAGREE with the statement.**
**3 I SLIGHTLY DISAGREE with the statement.**
**4 I SLIGHTLY AGREE with the statement.**
**5 I AGREE with the statement.**
**6 I STRONGLY AGREE with the statement.**

9. Low achievers in mathematics need to be given more practice sheets.

1 2 3 4 5 6

10. I cannot succeed when working with low achievers in mathematics.

1 2 3 4 5 6

11. I find it irritating to work with students who are slow in mathematics.

1 2 3 4 5 6

12. Sometimes it does a low achiever in mathematics good to be criticized in front of other students.

1 2 3 4 5 6

13. Low achievers in mathematics are usually pleasant.

1 2 3 4 5 6

14. Mathematics teachers need to be patient and listen to low achievers verbalize their thought processes.

1 2 3 4 5 6

15. Low achievers in mathematics lack the self-discipline necessary to study mathematics effectively.

1 2 3 4 5 6

16. By trying different teaching methods, teachers can help improve student achievement in mathematics.

1 2 3 4 5 6

17. Teachers should provide opportunities for low achievers to experience success in mathematics.

1 2 3 4 5 6

18. I like the challenge of working with low achievers in mathematics.

1 2 3 4 5 6

**1 I STRONGLY DISAGREE with the statement.**
**2 I DISAGREE with the statement.**
**3 I SLIGHTLY DISAGREE with the statement.**
**4 I SLIGHTLY AGREE with the statement.**
**5 I AGREE with the statement.**
**6 I STRONGLY AGREE with the statement.**

19. I feel angry when assigned to teach low achievers in mathematics.
1 2 3 4 5 6

20. Having low achievers in my mathematics class hinders the progress of the whole class.
1 2 3 4 5 6

21. Low achievers in mathematics are usually polite.
1 2 3 4 5 6

22. Low achievers exhibit distrust and hostility toward mathematics teachers
1 2 3 4 5 6

23. Low achievers in mathematics usually do not comprehend what is explained to them in class.
1 2 3 4 5 6

24. I find it difficult to care about the success of low achievers in mathematics.
1 2 3 4 5 6

25. Low achievers in mathematics should be placed in low ability groups.
1 2 3 4 5 6

26. I communicate well with low achievers in mathematics.
1 2 3 4 5 6

27. Low achievers in mathematics are usually well-behaved in mathematics class.
1 2 3 4 5 6

28. Low achievers in middle grade mathematics can benefit from using manipulatives.
1 2 3 4 5 6

**1 I STRONGLY DISAGREE with the statement.**
**2 I DISAGREE with the statement.**
**3 I SLIGHTLY DISAGREE with the statement.**
**4 I SLIGHTLY AGREE with the statement.**
**5 I AGREE with the statement.**
**6 I STRONGLY AGREE with the statement.**

29. Low achievers in mathematics are not interested in learning mathematics.
1 2 3 4 5 6

30. Low achievers in mathematics should be encouraged to write problems based on everyday experiences.
1 2 3 4 5 6

31. The most teachers should expect of low achievers is for them to learn basic arithmetic facts.
1 2 3 4 5 6

32. Low achievers in mathematics are frequently impatient.
1 2 3 4 5 6

33. Most of my interactions with low achievers in mathematics are positive.
1 2 3 4 5 6

34. Low achievers in mathematics should experience the same mathematics curriculum as other students.
1 2 3 4 5 6

35. Low achievers in mathematics usually complete their homework.
1 2 3 4 5 6

36. Low achievers in mathematics are good listeners in mathematics class.
1 2 3 4 5 6

37. I find it rewarding to work with low achievers in mathematics.
1 2 3 4 5 6

38. Low achievers in mathematics value the learning of mathematics.
1 2 3 4 5 6

**1 I STRONGLY DISAGREE with the statement.**
**2 I DISAGREE with the statement.**
**3 I SLIGHTLY DISAGREE with the statement.**
**4 I SLIGHTLY AGREE with the statement.**
**5 I AGREE with the statement.**
**6 I STRONGLY AGREE with the statement.**

39. The work of low achievers is usually messy and disorganized.
1 2 3 4 5 6

40. I feel frustrated when trying to teach low achievers in mathematics.
1 2 3 4 5 6

41. Mathematics teachers should provide opportunities for low achievers to see the usefulness of mathematics.
1 2 3 4 5 6

42. Enrichment activities are not suitable for low achievers in mathematics.
1 2 3 4 5 6

43. Students who are low achievers in mathematics need to be reminded of their limitations when they try to tackle problems too difficult for them.
1 2 3 4 5 6

44. Low achievers in mathematics are generally energetic.
1 2 3 4 5 6

45. Low achievers in mathematics do not like challenging assignments.
1 2 3 4 5 6

## Scoring Information

## Teacher Attitudes Toward Low Achievers in Mathematics Scale (TALAM)

### Description

Three 15-item scales are contained in the 45-items listed. All 45 items should be administered at one time. However, the scales should be scored separately in order to obtain information about the different dimensions of teachers' attitudes toward low achievers in mathematics. The following chart indicates the factor which each item measures.

| | Feelings Factor | Beliefs Factor | Intended Beh. Factor |
|---|---|---|---|
| Item Number | 1, 3, 6, 7, 8, 10, 11, 18, 19, 20, 24, 26, 33, 37, 40 | 2, 13, 15, 21, 22, 23, 27, 29, 32, 35, 36, 38, 39, 44, 45 | 4, 5, 9, 12, 14, 16, 17, 25, 28, 30, 31, 34, 41, 42, 43 |

### Scoring of the Scales

On each scale some items are worded positively ("Working with low achievers in mathematics is fun."), and some are worded negatively ("Low achievers in mathematics are behavior problems."). Positive and negative items are scored as follows:

| POSITIVE | | NEGATIVE | |
|---|---|---|---|
| Marked | Score | Marked | Score |
| Strongly Disagree | = 1 | Strongly Disagree | = 6 |
| Disagree | = 2 | Disagree | = 5 |
| Slightly Disagree | = 3 | Slightly Disagree | = 4 |
| Slightly Agree | = 4 | Slightly Agree | = 3 |
| Agree | = 5 | Agree | = 2 |
| Strongly Agree | = 6 | Strongly Agree | = 1 |

A summary of scoring of items follows:

**Teacher Belief Scale**

| Item | Str Dis | Disagree | Sl Dis | Sl Agree | Agree | Str Agree |
|---|---|---|---|---|---|---|
| 2 | 1 | 2 | 3 | 4 | 5 | 6 |
| 13 | 1 | 2 | 3 | 4 | 5 | 6 |
| 15 | 6 | 5 | 4 | 3 | 2 | 1 |
| 21 | 1 | 2 | 3 | 4 | 5 | 6 |
| 22 | 6 | 5 | 4 | 3 | 2 | 1 |
| 23 | 6 | 5 | 4 | 3 | 2 | 1 |
| 27 | 1 | 2 | 3 | 4 | 5 | 6 |
| 29 | 6 | 5 | 4 | 3 | 2 | 1 |
| 32 | 6 | 5 | 4 | 3 | 2 | 1 |
| 35 | 1 | 2 | 3 | 4 | 5 | 6 |
| 36 | 1 | 2 | 3 | 4 | 5 | 6 |
| 38 | 1 | 2 | 3 | 4 | 5 | 6 |
| 39 | 6 | 5 | 4 | 3 | 2 | 1 |
| 44 | 1 | 2 | 3 | 4 | 5 | 6 |
| 45 | 6 | 5 | 4 | 3 | 2 | 1 |

**Teacher Feelings Scale**

| Item | Str Dis | Disagree | Sl Dis | Sl Agree | Agree | Str Agree |
|---|---|---|---|---|---|---|
| 1 | 6 | 5 | 4 | 3 | 2 | 1 |
| 3 | 6 | 5 | 4 | 3 | 2 | 1 |
| 6 | 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 8 | 1 | 2 | 3 | 4 | 5 | 6 |
| 10 | 6 | 5 | 4 | 3 | 2 | 1 |
| 11 | 6 | 5 | 4 | 3 | 2 | 1 |
| 18 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 | 6 | 5 | 4 | 3 | 2 | 1 |
| 20 | 6 | 5 | 4 | 3 | 2 | 1 |
| 24 | 6 | 5 | 4 | 3 | 2 | 1 |
| 26 | 1 | 2 | 3 | 4 | 5 | 6 |
| 33 | 1 | 2 | 3 | 4 | 5 | 6 |
| 37 | 1 | 2 | 3 | 4 | 5 | 6 |
| 40 | 6 | 5 | 4 | 3 | 2 | 1 |

**Teacher Intended Behavior Scale**

| Item | Str Dis | Disagree | Sl Dis | Sl Agree | Agree | Str Agree |
|---|---|---|---|---|---|---|
| 4 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 6 | 5 | 4 | 3 | 2 | 1 |
| 9 | 6 | 5 | 4 | 3 | 2 | 1 |
| 12 | 6 | 5 | 4 | 3 | 2 | 1 |
| 14 | 1 | 2 | 3 | 4 | 5 | 6 |
| 16 | 1 | 2 | 3 | 4 | 5 | 6 |
| 17 | 1 | 2 | 3 | 4 | 5 | 6 |
| 25 | 6 | 5 | 4 | 3 | 2 | 1 |
| 28 | 1 | 2 | 3 | 4 | 5 | 6 |
| 30 | 1 | 2 | 3 | 4 | 5 | 6 |
| 31 | 6 | 5 | 4 | 3 | 2 | 1 |
| 34 | 1 | 2 | 3 | 4 | 5 | 6 |
| 41 | 1 | 2 | 3 | 4 | 5 | 6 |
| 42 | 6 | 5 | 4 | 3 | 2 | 1 |
| 43 | 6 | 5 | 4 | 3 | 2 | 1 |

## TALAM Scale Score Sheet

| Beliefs | | Feelings | | Int. Behav. | |
|---|---|---|---|---|---|
| + 2 | ____ | - 1 | ____ | + 4 | ____ |
| +13 | ____ | - 3 | ____ | - 5 | ____ |
| -15 | ____ | - 6 | ____ | - 9 | ____ |
| +21 | ____ | - 7 | ____ | -12 | ____ |
| -22 | ____ | + 8 | ____ | +14 | ____ |
| -23 | ____ | -10 | ____ | +16 | ____ |
| +27 | ____ | -11 | ____ | +17 | ____ |
| -29 | ____ | +18 | ____ | -25 | ____ |
| -32 | ____ | -19 | ____ | +28 | ____ |
| +35 | ____ | -20 | ____ | +30 | ____ |
| +36 | ____ | -24 | ____ | -31 | ____ |
| +38 | ____ | +26 | ____ | +34 | ____ |
| -39 | ____ | +33 | ____ | +41 | ____ |
| +44 | ____ | +37 | ____ | -42 | ____ |
| -45 | ____ | -40 | ____ | -43 | ____ |
| **B TOTAL** | ____ | **F TOTAL** | ____ | **I TOTAL** | ____ |

**Optional: Total Scale Score (B+F+I) =**

| **For Negative Items** | | **For Positive Items** | |
|---|---|---|---|
| Strongly Disagree | = 6 | Strongly Disagree | = 1 |
| Disagree | = 5 | Disagree | = 2 |
| Slightly Disagree | = 4 | Slightly Disagree | = 3 |
| Slightly Agree | = 3 | Slightly Agree | = 4 |
| Agree | = 2 | Agree | = 5 |
| Strongly Agree | = 1 | Strongly Agree | = 6 |

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